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EXAMINER
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GWARTNEY, ELIZABETH A

ART UNIT	PAPER NUMBER
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1794

NOTIFICATION DATE	DELIVERY MODE
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11/26/2008

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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## Office Action Summary

Application No.

10/530,920

Applicant(s)

MIRANDA ET AL.

Examiner

Elizabeth Gwartney

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**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period **will** apply and **will** expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply **will**, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 08 August 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-32 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-32 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date: \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Response to Amendment***

1. The Amendment filed 08/08/2008 has been entered. Claims 1-32 are pending.

### ***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 9-10, 19 and 21-22 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

4. A broad range or limitation together with a narrow range or limitation that falls within the broad range or limitation (in the same claim) is considered indefinite, since the resulting claim does not clearly set forth the metes and bounds of the patent protection desired. See MPEP § 2173.05(c). Note the explanation given by the Board of Patent Appeals and Interferences in *Ex parte Wu*, 10 USPQ2d 2031, 2033 (Bd. Pat. App. & Inter. 1989), as to where broad language is followed by "such as" and then narrow language. The Board stated that this can render a claim indefinite by raising a question or doubt as to whether the feature introduced by such language is (a) merely exemplary of the remainder of the claim, and therefore not required, or (b) a required feature of the claims. Note also, for example, the decisions of *Ex parte Steigewald*, 131 USPQ 74 (Bd. App. 1961); *Ex parte Hall*, 83 USPQ 38 (Bd. App. 1948); and *Ex parte Hasche*, 86 USPQ 481 (Bd. App. 1949). In the present instance:

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- Claim 9 recites the broad recitation "comprises between 0.05% and 4% ...said edible compound", and the claim also recites "preferably between 0.05% and 2% by weight" which is the narrower statement of the range/limitation.

- Claim 10 recites the broad recitation "thickness of the coating layer of said nut,..., ranges from 5  $\mu$ m to 1mm", and the claim also recites "preferably, 10-200  $\mu$ m" which is the narrower statement of the range/limitation.

- Claim 19 recites the broad recitation "comprises an edible compound . . . in a concentration between 1% and 20% by weight", and the claim also recites "preferably between 2% -14% by weight" which is the narrower statement of the range/limitation.

- Claim 21 recites the broad recitation "comprises an edible compound . . . in a concentration between 0.05% and 4% by weight", and the claim also recites "preferably between 0.05% -2% by weight" which is the narrower statement of the range/limitation.

- Claim 22 recites the broad recitation "air at a temperature equal to or lower than 200°C", and the claim also recites "preferably at a temperature equal to or lower than 110°C" which is the narrower statement of the range/limitation.

### ***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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6. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

7. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

8. Claims 1-6, 8-15, 17-23, 25, 27 and 28-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Steele et al. (WO 83/00278) in view of Grillo et al. (US 5,470,581).

Regarding claim 1, Steele et al. disclose a nut composition provided with an edible coating (Abstract), which comprises:

- a nut(see peanut – Abstract), and
- a layer of coating for said nut that comprises an edible film (Abstract),  
said film comprising an edible compound selected from the group

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consisting of acacia gum, cellulose derivatives and dextrans (p.8/L25-p.9/L3).

While Steele et al. disclose an edible film comprising an edible compound selected from the group consisting of acacia gum, cellulose derivatives and dextrans (P.8/L25-p.9/L3), the reference does not explicitly disclose hydroxypropylmethyl cellulose (HPMC), hydroxypropyl cellulose (HPC), methyl cellulose (MC), carboxymethyl cellulose (CMC), ethylmethyl cellulose (EMC), maltodextrin (MD) or their mixtures.

Grillo et al. teach a protective film for coating food forms comprising a mixture of maltodextrin and a cellulose derivative (Abstract, C2/L1-5) wherein the cellulose derivative includes methyl cellulose (MC), hydroxypropyl cellulose (HPC), hydroxypropylmethyl cellulose (HPMC), or carboxymethyl cellulose (CMC) (Abstract, C1/L60-C2/L5). Further, Grillo et al. teach maltodextrin, in combination with cellulosic polymers, exhibits excellent adhesive qualities, enhanced gloss characteristics, and reduced incidence of cloudiness (C5/L35-39).

Steele et al. and Grillo et al. are combinable because they are concerned with the same field of endeavor, namely, compositions for edible films. It would have been obvious to one of ordinary skill in the art at the time of the invention to have added maltodextrin and cellulosic polymers, as taught by Grillo et al., to the acacia gum film coating of Steele et al. for the purpose of improving the clarity of the coating. Further, doing so would improve the adhesive and glass characteristics of the protective film coating.

Regarding claims 2-3, modified Steele et al. disclose all of the claim limitations as set forth above. Further, Steele et al. disclose that said nut is selected from the group consisting of peanuts (Abstract) wherein said nut is whole (p.4/L29-30).

Regarding claims 8 and 11, modified Steele et al. disclose all of the claim limitations as set forth above. Further, Steele et al. disclose that said edible film further comprises a protein (p.9/L1) and the nut composition further comprises an additive selected from the group consisting of sweeteners (see sugar - Abstract).

Regarding claim 9, modified Steele et al. disclose all of the claim limitations as set forth above. Further, Steele et al. disclose that the quantity of edible compound present on the coated nut, expressed in dry weight in relation to the total weight of the coated nut lies between 0.05 and 2% by weight (p.9/L9-11).

Regarding claim 10, modified Steele et al. disclose all of the claim limitations as set forth above, however, Steele et al. do not disclose a nut composition in which the thickness of the coating layer of said nut, which comprises an edible film, ranges from 5  $\mu\text{m}$  to 1 mm. As hardness and continuity of the coating are variables that can be modified, among others by adjusting said thickness of coating, with said hardness and continuity of the coating both increasing as the coating thickness is increased, the precise coating thickness would have been considered a result effective variable by one having ordinary skill in the art at the time the invention was made. As such, without showing unexpected results, the claimed coating thickness cannot be considered critical.

Accordingly, one of ordinary skill in the art at the time the invention was made would have optimized, by routine experimentation, the thickness of the edible coating of Steele et al. to obtain the desired balance between the continuity of the coating and the hardness

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of the final nut product (*In re Boesch*, 617 F.2d. 272, 205 USPQ 215 (CCPA 1980)), since it has been held that where the general conditions of the claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. (*In re Aller*, 105 USPQ 223).

Regarding claims 12-15, Steele et al. disclose a method for producing a nut coated with an edible coating (Abstract) according to claim 1, as set forth above, which comprises the steps of:

- applying a filmogenic solution that comprises an edible compound selected from the group consisting of acacia gum (i.e. gum acacia), cellulose derivatives and dextrans on the surface of a nut to be coated (Abstract, p.8/L25-p.9/L3) and
- drying the filmogenic solution deposited on the surface of said nut to be coated (see roasting – p. 10/L12-24).

While Steele et al. disclose an edible film comprising an edible compound selected from the group consisting of acacia gum, cellulose derivatives and dextrans (p.8/L25-p.9/L3), the reference does not explicitly disclose hydroxypropylmethyl cellulose (HPMC), hydroxypropyl cellulose (HPC), methyl cellulose (MC), carboxymethyl cellulose (CMC), ethylmethyl cellulose (EMC), maltodextrin (MD) or their mixtures.

Grillo et al. teach a protective film for coating food forms, comprising a mixture of maltodextrin and a cellulose derivative (Abstract, C2/L1-5) wherein the cellulose derivative includes methyl cellulose (MC), hydroxypropyl cellulose (HPC),

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hydroxypropylmethyl cellulose (HPMC), or carboxymethyl cellulose (CMC) (Abstract, C1/L60-C2/L5). Further, Grillo et al. teach maltodextrin, in combination with cellulosic polymers, exhibits excellent adhesive qualities, enhanced gloss characteristics, and reduced incidence of cloudiness (C5/L35-39).

Steele et al. and Grillo et al. are combinable because they are concerned with the same field of endeavor, namely, compositions for edible films. It would have been obvious to one of ordinary skill in the art at the time of the invention to have added maltodextrin and cellulosic polymers, as taught by Grillo et al., to the acacia gum film coating of Steele et al. for the purpose of improving the clarity of the coating. Further, doing so would improve the adhesive and glass characteristics of the protective film coating.

Regarding claim 17, modified Steele et al. disclose all of the claim limitations as set forth above. Further, Steele et al. disclose that said edible film further comprises a protein (p.9/L1).

Regarding claim 18, modified Steele et al. disclose all of the claim limitations as set forth above. Further, Steele et al. disclose said filmogenic solution comprises one or more edible compounds in a concentration between 1% - 50% by weight (see from about 5 to 15% by weight - p.10/L8-9).

Claim 19, modified Steele et al. disclose all of the claim limitations as set forth above. Further, Steele et al. disclose a filmogenic solution comprising an edible compound selected from the group of cellulose derivatives in a concentration between 2 and 14% (see from about 2 to about 10% of the weight of the coating (p.9/L12-13)).

Regarding claim 20, modified Steele et al. disclose all of the claim limitations as set forth above. Steele et al. disclose said filmogenic solution is applied on the nut to be coated in a rotary drum by dripping (see rotatable coating reel and rate of addition (i.e. dripping - p.7/L17-18, p.8/L13).

Regarding claim 21, modified Steele et al. disclose all of the claim limitations as set forth above. Further, Steele et al. disclose that the quantity of edible compound present on the coated nut, expressed in dry weight in relation to the total weight of the coated nut lies between 0.05 and 2% by weight (p.9/L9-11).

Regarding claim 22, modified Steele et al. disclose all of the claim limitations as set forth above and Steele also discloses that the drying of said filmogenic solution deposited on said nut to be coated is done with air at a temperature equal to or lower than 200°C (see from about 150° to about 180°C – p.10/L17-18).

Regarding claim 23, modified Steele et al. disclose all of the claim limitations as set forth above. Further, Steele et al. disclose that the drying of said filmogenic solution deposited on said nut to be coated comprises the addition of a compound in powder form, selected from the group consisting of an edible protein (i.e. peanut skins – p.5/L14-20, p.9/L14-21).

Regarding claim 25, Steele et al. disclose all of the claim limitations as set forth above. Further, Steele et al. disclose that the drying of said filmogenic solution deposited on said nut is done in an oven (p.10/L14).

Regarding claim 27, modified Steele et al. disclose all of the claim limitations as set forth above. While Steele discloses a method for producing a nut coated with an edible coating including application and drying stages, the reference does not explicitly

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disclose repeating the stages a variable number of times. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have repeated the application and drying stages. Mere duplication of the application and drying steps has not patentable significance unless a new and unexpected result is produced.

Regarding claims 28 and 30, modified Steele et al. disclose all of the claim limitations as set forth above. Steele et al. also disclose that layers are formed which are the same or different (Abstract). Further Steele et al. disclose the addition of one or more additives to said coated nut (see sugar – Abstract).

Regarding claims 31-32, modified Steele et al. disclose all of the claim limitations as set forth above and further discloses that the nut comprises an additional coating selected from the group consisting of sugar and salt, which covers said coated nut (p.3/L27-32, p.5/L14-20, p.9/L14-30). Steele et al. also disclose a derivative of a nut which comprises a nut obtainable by means of the method according to claim 12, and further comprises an additional coating selected from the group consisting of sugar and salt, which covers said coated nut (p.3/L27-32, p.5/L14-20, p.9/L14-30).

9. Claims 7 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Steele et al. (WO 83/00278) in view of Grillo et al. (US 5,470,581) as applied to claim 1 and 12 above, and further in view of Kester et al. (“An Edible Film of Lipids and Cellulose Ether”).

Regarding claims 7 and 16, modified Steele et al. disclose all of the claim limitations as set forth above. While Steele et al. disclose said edible compound comprises cellulose derivatives, the reference does not explicitly disclose said edible

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compound comprises a mixture of (i) a cellulose ether and (ii) a lipid or a combination of various lipids.

Kester et al. teach an edible film comprising a cellulose ether and lipid (Abstract). Further, Kester et al. teach that lipid-based films effectively retard transport of moisture (Abstract).

Steele et al., Grillo et al. and Kester et al. are combinable because they are concerned with the same field of endeavor, namely, edible films comprising cellulose derivatives. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have used a mixture of lipid and cellulose ether, as taught by Kester et al., in the edible film coating of Steele et al. for the purpose of mitigating moisture migration.

10. Claims 24 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Steele et al. (WO 83/00278) in view of Grillo et al. (US 5,470,581) as applied to claim 12 above, and further in view of Fellows ("Food Processing Technology-Principles and Practice").

Regarding claims 24 and 26, while modified Steele et al. disclose drying of said filmogenic solution in an oven, the reference does not disclose drying in a rotary drum by means of a blower or in a drying tunnel that comprises areas for hot air drying, infra-red lamp radiation drying, and cold air cooling. Fellows teaches that rotary drum and tunnel driers were well known in the art at the time the invention was made (p. 324). Further, it was well known that tunnel drying includes multiple stages with the first stage being the hottest, the exit stage the coldest, and the intermediate stage can include infra-red

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radiation. Fellows also teaches that the type of dryer chosen will depend on cost, capacity, fuel efficiency, and labor requirement (p.325). As the instant specification is silent to unexpected results, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use any drier type, including a rotary drum drier and a drying tunnel with three stages to dry the filmogenic solution of Steele et al. because it would amount to nothing more than the use of a known drier for its intended use in a known environment to accomplish entirely expected result.

11. Claim 29 is rejected under 35 U.S.C. 103(a) as being unpatentable over Steele et al. (WO 83/00278) in view of Grillo et al. (US 5,470,581) as applied to claim 12 above, and further in view of Seaborne et al. (US 4,820,533).

Regarding claim 29, modified Steele et al. disclose all of the claim limitations as set forth above, however, Steele et al. do not disclose the inclusion of one or more additives to said filmogenic solution.

Seaborne et al. teach of edible barriers comprising plasticizers (C8/L25-40). Further, Seaborne et al. teach that plasticizers soften edible barriers made from cellulose ethers making them less brittle (C8/L25-40).

Steele et al., Grillo et al. and Seaborne et al. are combinable because they are concerned with the same field of endeavor, namely, edible films useful for foods. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have included a plasticizer, as taught by Seaborne et al., as an additive in the filmogenic solution of Steele et al. for the purpose of making a less brittle edible film coating.

***Response to Arguments***

12. Applicant's arguments filed 08/082008 have been fully considered but they are not persuasive.

Applicants argue that because claims 1 and 12 no longer recite “acacia gum”, Steele et al. does not disclose all of the limitations of claims 1 and 12 and all claims dependent therefrom.

Applicants note that claims 1 and 12 recite specific selected compounds. Applicants argue that while Steele et al. disclose filmogenic compositions comprising broad groups of compounds including all nutritionally acceptable cellulose derivatives, and all nutritionally acceptable dextrans, the reference does not specifically disclose a specific dextrin, namely, maltodextrin; or specific cellulose derivatives, namely, HPMC, HPC, MC, CMC and EMC. Applicants assert that the specific cellulose derivatives and specific dextrin are selected on the basis of their protective capabilities and physiochemical properties respectively.

Applicants' arguments with respect to claims 1 and 12 have been considered but are moot in view of the new grounds of rejection.

Applicants note that Steele et al. recite a method different from claim 12 of the present invention.

Steele et al. in combination with Grillo et al. disclose the method steps of claim 12. While Steele et al. disclose additional method steps that are not disclosed in the present application, the transitional term “comprising” is inclusive or open-ended and does not exclude additional, unrecited method steps. *Invitrogen Corp. v. Biocrest Mfg.*,

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*L.P.*, 327 F.3d 1364, 1368, 66 USPQ2d 1631, 1634 (Fed. Cir. 2003) (“The transition, comprising, in a method indicates that the claim is open-ended and allows for additional steps.”) MPEP 2111.03 [R-3]

### ***Conclusion***

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Elizabeth Gwartney whose telephone number is (571) 270-3874. The examiner can normally be reached on Monday - Thursday; 7:30AM - 5:00PM EST, working alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Callie Shosho can be reached on (571) 272-1123. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/E. G./

Examiner, Art Unit 1794

/Callie E. Shosho/

Supervisory Patent Examiner, Art Unit 1794